Mr William Caton
Acting Secretary
Federal Communications Commission
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Regarding: RM-8653

8-July-1995

Dear Mr. Caton,

Enclosed, please find 15 copies of my comment on RM-8653. Please distribute this document to the commissioners and staff.

Please confirm service of the document by adding the appropriate notation to the enclosed post card and returning it to me.

Many Thanks

Bruce Perens

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Allocation of Spectrum in the 5 GHz Band to Establish a Wireless Component of the National Information Infrastructure	)	RM-8653

COMMENT OF BRUCE PERENS ON THE APPLE NII BAND PETITION

Submitted: July 8, 1995

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I. INTRODUCTION

1. As I write, there are 32,785 Amateur Radio stations registered in the Internet address database as users of the Internet TCP/IP communications protocol over radio.[1] There are hundreds of thousands of Amateur Radio stations participating in radio digital networking. About 15 years ago, the operators these stations invented the community radio networks and radio "on-ramps" to the Information Superhighway that Apple proposes as a new innovation. The operators of these stations are waiting for the opportunity to expand the services they currently are allowed to provide only to Radio Amateurs to include the general public.

2. Apple's proposed "NII Band" service is attractive to many individuals who are currently Amateur Radio digital network operators, because it would not impose the many legal restrictions that they currently must tolerate within the Amateur Service. In this document, I go over some of these restrictions and show the advantages that would be gained if current Amateur digital network operators were to operate in the proposed NII band and serve a much wider audience.

II. DISCUSSION

1. Apple proposes what it calls "an entirely new application of wireless networking: the community network". Of course, this is the sort of network that has been operated since 1981 in the Amateur Packet Radio service under Part 97 of the FCC rules. I currently operate a "gateway node" in such a network, serving the East Bay portion of the San Francisco Bay area.

2. The most important service of my gateway is that I provide local Radio Amateurs with access to the Internet at no charge, via radio. The primary reasons I have for operating my gateway system are the personal gratification I get from community service, the opportunity it provides me to learn about computer networking, and the chance for improved communication with my community and the world. The users of my gateway have the benefit of all of the opportunities provided by wireless access to the Internet.

3. Unfortunately, there are many regulatory impediments placed on my gateway. Most importantly, I am restricted to providing service only to Radio Amateurs, when there are many people in my community who could benefit from the service I provide. Even when I communicate only with Radio Amateurs, there are many restrictions on who I can talk to and what I can talk about. Under part 97.219d of the FCC rules, I am accountable as "the first forwarding station" for violations carried out by the users of my gateway. There are many possible violations: for example, under 97.3a(10) if a message is sent using a broadcast communications protocol, that message "must not be of interest to the general public". Under 97.113a(5), there may be no "communications, on a regular basis, which could reasonably be furnished alternatively through other radio services." 97.113a(2) prohibits communications for hire, and 97.113a(3) bans messages for one's employer or those in which the sender of the message has a pecuniary interest.

4. Another serious restriction upon my digital radio network operations is imposed by the 97.115 rules on third-party communications. My gateway station isn't allowed to carry a message for a third party in another country unless there is a special treaty between that country and the United States regarding Amateur Radio communications. Unfortunately, there are many countries that haven't signed this special treaty with the U.S., but almost every country is a party to an International Telecommunications Union treaty that would allow such messages to be carried over the NII Band.

5. Because of the chilling effect the above restrictions have had upon Amateur Radio digital networks, the prospect of a service capable of medium-distance communications, over which I can discuss any decent subject, with anyone I please, is very attractive. If such a service were to become available, I would start a networking operation similar to the one I now have on the Amateur bands, and enjoy a new freedom of communication as well as the ability to serve and communicate with a much larger portion of the public.

6. The Apple proposal does not pay sufficient heed to the prospect that individuals and community groups would want to build and operate networks using the NII Band, not as a business activity but for community service, education, and personal gratification. Apple states that they expect that the NII Band networks will be outgrowths of current networks built by telephone and cable companies, broadcasters and satellite operators. These kinds of companies might more appropriately be using licensed bands that they have acquired the rights to through frequency auctions. It's easy to see how broadcasters, phone companies, and cable operators could monopolize a service such as the NII band, even though such a band would only be available to packet-switched services. They could simply fill the band with enough information, radiated power, and individual transmitting stations to use up all available bandwidth and time-slices in which others could transmit. Schools, libraries, and individuals, with their modest operations, would simply be squeezed out of the band.

7. Apple states that the operating conventions and rules for the NII band should be developed by the information industry. They ignore that community radio networks have been operated for 15 years by the Amateur Service, and that many of the problems of operating such networks have already been dealt with by Radio Amateurs. Although Apple actively cooperated with the American Radio Relay League during the recent 2400 MHz PCS proceedings, they did not seek the cooperation of Radio Amateurs by consulting them before filing this petition. Radio Amateurs have much to contribute to the planning of the new NII Band service because they have experience in operating a similar, though smaller, service for more than a decade. We would like to be consulted as the planning for the NII band continues.

8. In summary, I see merit in the Apple proposal, because it would allow the successful efforts of Radio Amateur digital network operators to be broadened to serve the entire public. I find fault in the Apple proposal in that it does not consider the part that individuals and community groups could play in network operation, and considers it the exclusive domain of large business entities.

REFERENCES

[1] I arrived at this number by counting the number of address records in the Internet address database under the AMPR.ORG domain. AMPR stands for Amateur Packet Radio, and is the Internet address domain reserved for Amateur Radio operations. The AMPR.ORG address database is managed by Mr. Brian Kantor of the University of California at San Diego. The database may be retrieved via Internet FTP to ftp.ucsd.edu:/hamradio/ampr.org . Mr. Kantor may be contacted using E-mail, his address is Brian@Nothing.UCSD.edu .

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